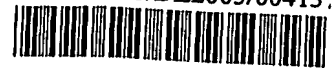


Translation

10/540208  
PATENT COOPERATION TREATY

PCT/DE2003/004137



PCT Rec'd PCT/PTO 22 JUN 2006

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P06756WO	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/DE2003/004137	International filing date (day/month/year) 15 December 2003 (15.12.2003)	Priority date (day/month/year) 19 December 2002 (19.12.2002)
International Patent Classification (IPC) or national classification and IPC G01N 33/543, C12Q 1/68		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☐ (sent to the applicant and to the International Bureau) a total of \_\_\_\_\_ sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report   |
| <input type="checkbox"/> Box No. II           | Priority  |
| <input type="checkbox"/> Box No. III          | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV           | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI           | Certain documents cited   |
| <input type="checkbox"/> Box No. VII          | Certain defects in the international application  |
| <input type="checkbox"/> Box No. VIII         | Certain observations on the international application   |

Date of submission of the demand 09 July 2004 (09.07.2004)	Date of completion of this report 24 March 2005 (24.03.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2003/004137

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

- ☐ The international application as originally filed/furnished
- ☒ the description:
- pages \_\_\_\_\_ 1-9 \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- pages \_\_\_\_\_ 1-15 \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- pages \_\_\_\_\_ 1/3-3/3 \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (specify): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (specify): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (specify): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE 03/04137

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	2-15	YES
	Claims	1	NO
Inventive step (IS)	Claims		YES
	Claims	1-15	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

### 2. Citations and explanations

1. This report makes reference to the following documents:

D1: WO 00/62047

D2: WO 02/41992

D3: DE-A-196 10 115.

2. D1 discloses a DNA chip with a flat carrier and, arranged thereon, an array of spots containing catcher molecules, a microelectrode arrangement being associated with each spot and each of said arrangements being embedded in a reaction layer in which immobilized catcher molecules are distributed (cf. claim 24: "...affinity-binding molecules... are carrier-bound in gelatinous substances" and page 40).

Therefore, the subject matter of claim 1 is no longer novel (PCT Article 33(2)).

Similar considerations apply to D2, which likewise discloses a DNA chip with the features of claim 1 (cf. page 8, lines 26-32: "In the hydrogel 3, a catcher-DNA can then be introduced, immobilized, for

a specific DNA detection" and figure 3).

3. The subject matter of claim 1 is also suggested by a combination of D2 and D3. D3 discloses a DNA chip corresponding to the preamble of claim 1. The objective technical problem to be solved can be regarded as that of insulating the individual spots from each other. D2 describes a solution to this problem, namely involving the use of a hydrogel (see above). Therefore, the obvious combination of the disclosures of D2 and D3 would lead a person skilled in the art to the subject matter of claim 1, without thereby involving an inventive step (PCT Article 33(3)).
4. The features of the dependent claims appear to relate to embodiments that are either known from the cited documents or are a matter of standard practice for a person skilled in the art.
5. Industrial applicability is acknowledged (PCT Article 33(4)).